

A B S T R A C T

A fault searching system for an optical line searches a fault in an optical line connected with an optical fiber carrying out data transmission between from a transmission apparatus at a center station side via an optical divider (PON) up to a user optical terminal. An OTDR carries out a test for the optical fiber based on backward scattering light or return light from the optical fiber by making test light be incident into the optical fiber. A connecting unit detaches a terminal portion of the optical line at an inside of the user optical terminal from the inside of the user optical terminal, and connects the OTDR to the terminal portion of the optical line. An incident unit makes at least one of test light with a wavelength different from a wavelength of light used for data transmission in the optical line, and test light whose peak level is less than or equal to a predetermined level be incident upon the terminal portion of the optical line from the OTDR. A searching unit searches for a fault in the optical line from the user optical terminal side by detecting backward scattering light or return light from the optical line which is obtained based on the incidence of the test light by the OTDR.